

REMARKS

The Examiner is thanked for the due consideration given the application.

Claims 1-5, 7-15 and 20 are pending in the application. Claims 1 and 2 have been amended to better set forth the invention being claimed in a fashion that raises no new issues.

No new matter is believed to be added to the application by this amendment.

Entry of this amendment under 37 CFR § 1.116 is respectfully requested because it complies with a matter of form set forth in the Official Action and places the application in condition for allowance.

Claim Objections

Claims 2, 10, 11, 13 and 20 have been objected to as failing to limit the subject matter of a previous claim.

However, claim 2 has been instantly amended to more clearly set forth subject matter that further limits independent claim 1. Claims 10, 11, 13 and 20 (which depend on claim 2) clearly set forth limitations and structures that limit a previous claim.

It is accordingly respectfully requested that the objections to the claims be withdrawn.

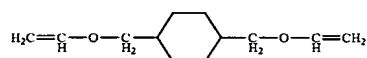
Rejections Under 35 USC §103(a)

Claims 1-5, 7, 8, 10-15 and 20 have been rejected under 35 USC §103(a) as being unpatentable over CRANE et al. in view of

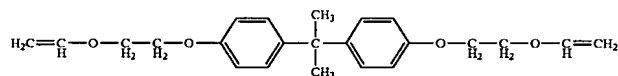
SEIICHI et al, and further in view of SUZUKI et al. Claims 1, 2, 4, 5, 7, 8, 11-13, 15 and 20 have been rejected under 35 USC §103(a) as being unpatentable over NORO et al. in view of SEIICHI et al., and further in view of SUZUKI et al. Claims 1, 2, 5, 8, 9 and 13 have been rejected under 35 USC §103(a) as being unpatentable over YEAGER et al. These rejections are respectfully traversed.

The present invention pertains to a vinyl ether curing composition that includes a polyfunctional vinyl ether compound, a polyhydric phenol compound and a flame retardant. As is evident from compound Nos. 1 to 5 set forth in the specification (depicted below), the polyfunctional vinyl ether compound of the present invention is free from carbonyl and hydroxyl groups. See instant claim 1.

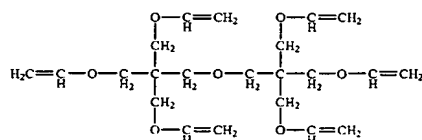
Compound No. 1:



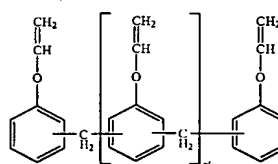
Compound No. 2:



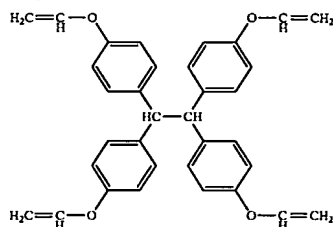
Compound No. 3:



Compound No. 4:



Compound No. 5:



CRANE et al. pertain to a sealing composition for a semiconductor that is an epoxy resin. CRANE et al. fail to disclose a phosphorous based flame retardant.

Similarly, NORO et al. fail to disclose a phosphorous based flame retardant.

What is disclosed in SEIICHI et al., as indicated by the Official Action, is a fire retardant epoxy resin curing composition containing a fire retardant represented by a formula corresponding to the formula (II) of the present invention and polyhydric phenol represented by a formula corresponding to the formula (1) of the present invention.

However, in SEIICHI et al., the resin to which the fire retardant and polyhydric phenol are added is an epoxy resin, and not polyhydric vinyl ether as in the present invention.

SUZUKI et al. pertain to flip chip mounting. SUZUKI et al. fail to teach a polyhydric phenol compound or a polyfunctional vinyl ether compound.

YEAGER et al. disclose a vinyl ether compound with a structure containing hydroxyl groups. As clearly taken from compound Nos. 1 to 5 of the present specification, the polyfunctional vinyl ether compound does not contain hydroxyl groups. Therefore, it is held that by adding this limiting feature (i.e., free from hydroxyl groups) to claim 1, it becomes readily apparent that the polyfunctional vinyl ether compound of

the present invention will not be rendered obvious over YEAGER et al.

The differences between the applied art and the present invention are summarized in the following table.

	Crane	Seiichi	Suzuki	Noro	Yeager
Polyhydric phenol compound	○	○	×	○	○
Phosphorus-based flame retardant	×	○	○	×	○
Polyfunctional vinyl ether compound	carbonyl group-containing compound	×	×	carbonyl group-containing compound	hydroxyl group-containing compound
Epoxy resin	○	○	○	○	○
Silica	○	○	○	○	○
Semiconductor device	○	○	○	○	○
Notes		Epoxy resin composition	Flip chip mounting	Microcapsule	

In contrast, the present invention is a vinyl ether curing composition that includes a polyfunctional vinyl ether compound free from carbonyl groups and hydroxyl groups, a polyhydric phenol compound and a flame retardant, containing 10 to 30 parts by weight of a phosphorus-based flame retardant as the flame retardant per 100 parts by weight of the total of the polyfunctional vinyl ether compound and the polyhydric phenol compound.

One of ordinary skill and creativity would fail to produce a claimed embodiment of the present invention from a knowledge of any combination of CRANE et al., SEIICHI et al.,

SUZUKI et al., NORO et al. and YEAGER et al., and a *prima facie* case of unpatentability has thus not been made.

Further, as evident from the description at paragraphs 0007 and 0020 of the present specification, the vinyl ether curing composition of the present invention can provide a cured product with a low dielectric constant, which can never be attained by a cured product composed mainly of an epoxy compound and a curing agent for the epoxy. This represents an unexpected result over the applied art references that would fully rebut any unpatentability that could be alleged.

These rejections are believed to be overcome, and withdrawal thereof is respectfully requested.

Conclusion

The Examiner is thanked for considering the Information Disclosure Statements filed December 15, 2005, March 14, 2006, and September 20, 2006 and for making initialed PTO-1449 Forms of record in the application.

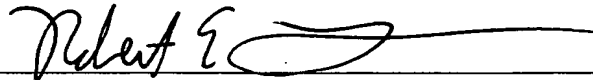
Prior art of record but not utilized is believed to be non-pertinent to the instant claims.

The objections and rejections are believed to have been overcome, obviated or rendered moot and that no issues remain. The Examiner is accordingly respectfully requested to place the application in condition for allowance and to issue a Notice of Allowability.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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